

Write your
questions here!

**LIKE DENOMINATORS!**

$$\frac{1}{3} + \frac{5}{3} =$$

$$\frac{x}{3} - \frac{5}{3} =$$

$$\frac{7}{3y^2} + \frac{5}{3y^2} =$$

$$\frac{9}{3x(2x+1)} - \frac{3}{3x(2x+1)} =$$

$$\frac{2y}{y^2-9} + \frac{5}{(y+3)(y-3)} =$$

UNLIKE DENOMINATORS!

$$\frac{1}{7} + \frac{5}{3} =$$

$$\frac{x}{7} - \frac{5}{3} =$$

$$\frac{4}{x} - \frac{5}{3} =$$

$$\frac{7}{3y^2} - \frac{5}{9y} =$$

$$\frac{9}{x-4} + \frac{3}{3x} =$$

$$\frac{2y}{y^2-9} - \frac{5}{4(y-3)} =$$

$$\frac{x+2}{2x-2} - \frac{-2x-1}{x^2-4x+3} =$$

COMPLEX FRACTIONS!

METHOD ONE	METHOD TWO
$\frac{\frac{2}{3} + \frac{1}{2}}{\frac{4}{3} - \frac{2}{5}} =$	$\frac{\frac{2}{3} + \frac{1}{2}}{\frac{4}{3} - \frac{2}{5}} =$

METHOD TWO IS AWESOME!

$$\frac{\frac{2}{x} + 3}{\frac{4}{3x} - \frac{7}{5}} =$$

$$\frac{\frac{2}{x+2}}{\frac{4}{x^2-4} - \frac{7}{x-2}} =$$

TRY IT!

$$\frac{-15x}{x^2 - 8x + 16} - \frac{8}{x - 4} =$$

$$\frac{5}{2x + 1} + \frac{3}{2x + 1} =$$

$$\frac{\frac{3}{x} + \frac{5}{x-2}}{\frac{6}{x^2 - 2x}} =$$

$$\frac{5}{x+1} + x =$$

SUMMARY:

Now,
summarize
your notes
here!



Perform the indicated operation.

1.

$$\frac{a+5}{10a} - \frac{2a}{10a} =$$

2.

$$\frac{2p}{6p+6} + \frac{2}{p-2} =$$

3.

$$\frac{5u}{u^3} + \frac{4}{3u} =$$

4.

$$\frac{8}{(m+3)(m-1)} - \frac{4m+1}{(m+3)(m-1)} =$$

5.

$$\frac{3}{x+4} - \frac{1}{x+6} =$$

6.

$$\frac{3n}{n-2} + 4 =$$

7.

$$\frac{y+1}{4y^2-9} - \frac{4}{2y-3} =$$

8.

$$\frac{p+5}{p^2+5p-14} + \frac{2}{p+7} =$$

9.

$$\frac{m}{3m^2-12} - \frac{3m+1}{m-2} =$$

10.

$$\frac{1-t}{(t-2)^2} + \frac{4}{5t} =$$

11.

$$\frac{2}{2x^3-12x^2-80x} - \frac{5x}{x^2-5x-50} =$$

12.

$$\frac{1}{w} + \frac{w-1}{5} =$$

ERROR ANALYSIS Describe and correct the error.

13.

$$\frac{x}{x+2} + \frac{4}{x-5} = \frac{x+4}{(x+2)(x-5)}$$

**Perform the indicated operations.**

14.

$$\frac{3}{r+2} + \frac{2r}{r+2} - \frac{7}{r+2} =$$

15.

$$\frac{5d}{3(d+2)} + \frac{2}{3} + \frac{4d}{d^2-4} =$$

Simplify.

16.

$$\frac{\frac{2}{3} - \frac{x}{9}}{\frac{4}{9} - \frac{x-3}{4}} =$$

17.

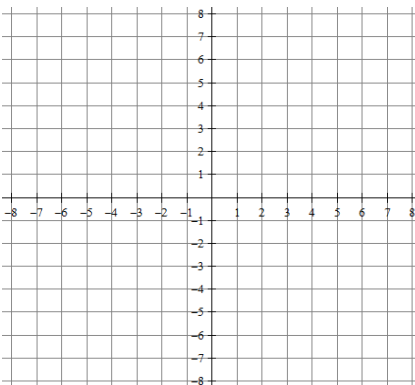
$$\frac{\frac{5}{x} + \frac{5}{x^2}}{\frac{16}{25} - \frac{3}{x^2}} =$$

18.

$$\frac{\frac{9}{x-3}}{\frac{x}{12} - \frac{4}{x-3}} =$$

19.

$$\frac{\frac{2}{3} + \frac{7}{x-4}}{\frac{4}{x^2-16} + 5} =$$

Algebra Skillz**GRAPH**1. Sketch a graph of $f(x) = x^3 - 5$ **SIMPLIFY**

2. $3\sqrt{2}(2 - \sqrt{5})$

3. $(2 + \sqrt{5})(3 - 2\sqrt{2})$

SOLVE4. Factor: $3x^2 - 12x - 36$

5. Solve by factoring.

$$x^2 - 27 = 6x$$

Perform the indicated operation.

1.

$$\frac{h+1}{h^2+10h+25} - \frac{3}{h+5} =$$

Simplify.

2.

$$\frac{\frac{1}{3} + \frac{2}{5}}{\frac{7}{4} - \frac{3}{5}} =$$

3. **COAST TO COAST** Mr. Kelly catches a Justin Bieber concert in New York City on Monday, then flies out the next day to Los Angeles for a One Direction concert. He then flies back to New York City to watch a live taping of the Ellen Show. He notices the flight to NY from LA is longer than the flight to LA from NY. The equation below represents the total time T (in hours) needed to fly from NY to LA and back.

$$T = \frac{d}{a-j} + \frac{d}{a+j}$$

where d is the distance each way in miles,
 a is the average airplane speed,
 and j is the average jet stream speed.

a. Simplify the right side of the equation.

$$T = \frac{d}{a-j} + \frac{d}{a+j}$$



b. Find the total time if $d = 2468$ miles, $a = 510$ mph, and $j = 115$ mph

4. SAT PREP

MULTIPLE CHOICE

Which expression is equal to $\frac{2x}{x+4} - \frac{x^2+4}{x^2-16}$?

- (A) $\frac{1}{x+4}$
- (B) $\frac{x^2-4}{x^2-16}$
- (C) $\frac{x^2-8x-4}{x^2-16}$
- (D) $\frac{3x^2-8x+4}{x^2-16}$
- (E) None of the above

GRID IN

Find the value of k so that $\frac{\frac{2}{5} + \frac{1}{3}}{\frac{k}{2}} = \frac{44}{30}$

⊙	⊙	⊙	⊙
	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9